Until recently, says Plewa, the literature in this area has suggested that bound residues exhibit little bioavailability when consumed by animals, so the "traditional idea is don't worry about them; it can't hurt you." However, recent studies demonstrated that scientists may be severely underestimating the bioavailability of these residues, with implications for risk assessment.

Studies published in the *Journal of Agricultural and Food Chemistry* showed 66% of chloroaniline (a model xenobiotic)–lignin metabolites were released as simple chloroaniline derivatives after passage through the rat gastrointestinal tract, and 11–20% of bound residues was released from 3,4-dichloroaniline–lignin isolated from wheat plants that were fed to rats and lambs. According to Plewa, these studies indicate that "the toxicity [of the metabolite] could be released. It isn't just tied up and disappears." There appears to be a wide range in the bioavailability of xenobiotics bound to insoluble plant fractions.

This range in bioavailability raises questions that may have great impact in the future for environmental toxicology. Plewa says that plants are being bombarded with materials. What isn't known is the capacity of plants to serve as a sink. Is it possible to saturate this sink so that plants cannot further absorb and metabolize chemicals to stable, insoluble forms, and if so, will plants then release what they can't absorb, damaging the biosphere? In addition, Plewa states that if current risk assessments are based on the amount of residue that is not bound, then a change in that estimate could have a radical effect: "You don't need to alter too much of the equation before it shifts the risk assessment."

Healthy People 2000

The U.S. Public Health Service's success in establishing disease prevention and health promotion objectives for the nation should provide a base for President Clinton's health care reform program. Prevention of disease and promotion of healthful behaviors are cornerstones of the health care reform package, which will likely include environmental health among its priorities.

In September 1990, PHS issued *Healthy People 2000: National Health Promotion and Disease Prevention Objectives.* The document sets specific goals for health promotion, disease prevention, and health protection in 21 critical areas. It also calls for the creation of data and surveillance systems to track progress toward the goals. An ad hoc working group chaired by staff from NIEHS and CDC established 16 environmental health objectives. Experts from academia, local, state, and federal regulatory and health agencies and health care providers served on the working group.

The environmental health objectives set ambitious targets for reducing environmentally related diseases and conditions such as asthma, mental retardation, waterborne diseases, and lead poisoning. Other goals include reducing pollution of indoor and ambient air, improving drinking and surface water supplies, and cleaning up hazardous wastes sites. Pollution prevention goals address solid waste air toxics and community-based recycling. The working group also sets goals for state and local programs for residential testing for lead paint and radon and developing construction standards for new homes to prevent accumulation of radon gas.

NIEHS and CDC have been assigned the tasks of developing strategies to attain the environmental health objectives and of tracking progress toward the goals. However, the implementation of the programs to achieve the objectives is shared by federal, state, and local agencies, health care providers, voluntary and professional organizations, community groups, and individual citizens. A steering committee with representatives from these groups has been created to assist NIEHS and CDC in this national effort. Progress is already being made toward many of the goals. An exception is protection of drinking water and surface water: water quality has worsened in many locations during the two years since the objectives were set. The recent outbreak of waterborne disease in Milwaukee, Wisconsin, lends credence to the importance of these objectives to public health.

Voices in the Wilderness

Severe poverty, death threats, and imprisonment are just some of the obstacles overcome by this year's winners of the Goldman Environmental Prize, the largest international award program for grassroots environmentalists.

The Goldman Prize, awarded for "sustained and important efforts to preserve or enhance the environment," includes a $60,000 award to allow the recipients to pursue their visions of a renewed and protected environment without financial constraints. The prize jury includes members of the Goldman Environmental Foundation and individuals such as Secretary of Interior Bruce Babbit and Joan Martin-Brown, director of the Washington, DC, office of the United Nations Environment Programme. A network of 19 internationally known environmental organizations including the Sierra Club, National Audubon Society, National Geographic Society, Environmental Defense Fund, Natural Resources Defense Council, and a confidential panel of environmental experts from more than 30 nations nominates the winners, one from each of the six inhabited continents.

Tom Harvey

The Goldman Environmental Foundation

Challenges. Lakota Indian JoAnn Tall has risen to the environmental challenges of Native Americans.

Sitting down at the table. Mayr brings Colombia's Kogis into an environmental alliance.

Asia: Dai Qing. The daughter of a revolutionary martyr, Qing, a former missile technician and one-time intelligence agent, is now a journalist in Beijing. Qing has openly and ardently opposed China's Three Gorges dam. The project, scheduled for China's Yangtze River, would force the resettlement of 1.2 million people, drown more than 100 sites of archaeological importance, and submerge a stretch of canyons known as Three Gorges. Taking great personal risk, Qing inspired dam opposition by compiling and publishing *Yangtze! Yangtze!* a collection of essays by prominent Chinese scholars critical of the dam. As a result, the project was shelved, at least temporarily.

Europe: Sviatoslav Igorevich Zabelin. In response to concern about the severe environmental problems facing the predemocratic Soviet Union, Zabelin cofounded the Socio-Ecological Union (SEU), a coalition of 250 grassroots environmental organizations working in 11 of